Amendment F (cont.)

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## REMARKS

The Applicant has amended the claims to define the invention more particularly and distinctly so as to overcome the technical rejections and define the invention patentably over the prior art.

The following remarks are numbered to correspond to the examiner's numbered sections presented in the Office Action dated October 18, 2011:

- 1. No Remarks
- Rejection of Claim 7 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim subject matter:
   Claim 7 has been amended to depend directly from Claim 1, instead of Claim 2 as previously presented.
- No Remarks.
- 4. Rejection of Claims 1, 11-15, 35-36, and 44 under 35 U.S.C. 102(b) as being anticipated by Posson (4,220,087):

The examiner's comparative analysis between the present invention and Posson (087) is based on the premise that "Posson (087) discloses a prolonged burning incendiary strand..." The applicant respectfully disagrees with the examiner's reading of Posson, and contends that Posson does not teach, nor suggest, a device that exhibits *prolonged* burning characteristics.

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Posson (087) discloses a rapidly-igniting ignition device operationally similar to many forms of pyrotechnic fuses, such as black match, quick match, deflagration cord, and ignitor cord. These devices provide a means for communicating an ignitive signal along a linear pathway, and do not provide for the sustained combustion of a separate, combustible element arranged along the body of the ignitive device. Posson does not disclose or suggest a device that provides prolonged burning, but rather describes an improvement to known devices that provide for a rapidly-progressing, short-duration, combustive reaction.

In contrast, the present linear incendiary strand possesses a co-linearly arranged rapid ignition means, and a separate, non-pyrotechnic "fuel component", wherein operatively a high velocity ignitive reaction traveling along the rapid ignition means ignites the connected fuel component. The specific attribute of the present invention that distinguishes it from Posson and similar known devices is the continued, free-burning combustion of a separate fuel component, which, after ignition, primarily utilizes atmospheric oxygen for the combustion reaction. The fuel component of the present invention more closely meets the definition of a "combustible fuel", in the true sense of the word "fuel", rather than a component of a pyrotechnic composition that includes a material to functionally *serve as a fuel* in a chemical reaction (the reducing agent in a redox reaction)

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Posson and other prior art devices do not provide the sustained, contiguous exterior flame generation that the present linear incendiary strand provides. Such long-duration burning is necessary for the ignition of nearby vegetative materials, some of which may have a high moisture content that inhibits ignition from the short-term flash of heat provided by the rapid burning of pyrotechnic compositions. Posson (087) teaches a device wherein "The flash from the fuse will ignite numerous materials such as black powder, double and single base smokeless powder, boron-potassium nitrate pellets, ..."

(col. 4; lines 14-22). Posson further teaches a device wherein "...the ignition reaction is propagated at a velocity of 1,000-1,500 meters per second." (col. 4; lines 6-12), and no suggestion is made to provide for a secondary, combustible fuel element that would sustain prolonged burning.

Claim 1 has been amended to specifically describe the fuel component as a "combustible" substance, which, by definition, limits the element to those materials that primarily utilize atmospheric oxygen for the combustion process (oxygen is not provided by an oxidizing agent, as is the case with pyrotechnic compositions). The claim language "...in the presence of atmospheric oxygen..." has been removed.

As amended, Claim 1 should be allowed based on the significant distinction between the subject matter disclosed in Posson (087), and the invention of the present application.

No Remarks.

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6. Rejection of Claims 2 and 7 under 35 U.S.C. 103(a) as being unpatentable over Posson (4,220,087) in view of Richardson et al. (3,712,222).

Applicant respectfully contends that Posson (087) does not apply, as discussed in Remarks section 4 above. Richardson (222) teaches an ignition fuse that provides a means for communicating an ignitive signal along a strand body, however as in Posson (087) and similar devices, there is no provision for the secondary ignition of a separate combustible fuel element to provide for prolonged burning along the strand. The fuel compound described in Richardson (222) is an integral component of the pyrotechnic composition that forms the singular core of the ignition fuse disclosed.

A significant novelty provided by the present invention is the combination of a free-burning fuel component that is connectively arranged with known rapid ignition means. As in other prior art devices, such as Richardson (222), the rapid ignition means of the linear incendiary strand may be comprised of a pyrotechnic composition that primarily consists of an oxidant (oxidizing substance), and a fuel compound (reducing substance), however the combustible fuel component of the incendiary strand is a separate, but connected element. The combustible fuel component of the present incendiary strand is distinct from the pyrotechnic compositions taught in prior art devices, most of which typically include a substance that serves as a fuel component, in combination with an oxygen generating component, to provide a deflagrative reaction upon ignition.

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The combination of a rapid ignition element and a combustible fuel component represents a novel approach for providing a rapidly-igniting, sustained burning device that may be used in setting fire to vegetative matter over an area of land. Those practiced in the art of wildland firefighting and prescribed burning recognize the advantages of igniting strips of natural fuels in a rapid manner, to provide for greater control over fire behavior using the convective and radiative effects of a contiguous fire front. The current practices of using helicopters or ground personnel to set fire to strips of vegetative matter have a number of shortcomings, as described in the specification of the present application. The linear incendiary strand disclosed in the application is an inventive solution to providing a rapidly-igniting, sustained burning ignition device. The device is based on a novel combination of known rapid ignition means (ie: quick match, fuses, deflagration cord, etc.) with a separate and co-linearly-arranged combustible fuel component. Prior art does not teach, nor suggest, such a combination.

- 7. Objection to Claims 16-18, 26, 47, and 49 as being dependent upon a rejected base claim.
  Applicant has provided arguments to address the issues on which the Examiner formed a basis for rejection of Claim 1, and requests that Claim 1 be allowed as amended.
- 8. No Remarks.

Amendment F (cont.)

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## CONCLUSION

For all of the above reasons, applicant submits that the specification and claims are now in proper form, and that the claims all define patently over the prior art. Therefore the applicant submits that this application is now in condition for allowance, which action is respectfully solicited.

## CONDITIONAL REQUEST FOR CONSTRUCTIVE ASSISTANCE

Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition for allowance, applicant respectfully requests the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P 2173.02 and 707.07(j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very Respectfully,

Jeffrey P. Reistroffer

Applicant Pro Se